

AMENDMENTS TO THE SPECIFICATION

Please insert the following new heading before paragraph [0001]:

BACKGROUND

Please insert the following new heading before paragraph [0003]:

BRIEF SUMMARY OF THE INVENTION

Please replace paragraph [0003] with the following amended paragraph:

[0003] It is, therefore, ~~the~~ an object of the present invention to devise a pump which will overcome these disadvantages.

Please replace paragraph [0004] with the following amended paragraph:

[0004] The ~~objective is achieved by~~ present invention provides a pump, such as a vane-type pump or a roller-cell pump, in particular a transmission pump, having a two-stroke delivery contour, the delivery contour having at least one rise zone, at least one large circle region, at least one fall zone, and at least one small circle region, and, inside of the delivery contour, the pump having a rotor provided with radially displaceable vanes or rollers in radial rotor slots, and the angular range of the large circle region of the delivery contour being lengthened as compared to a standard pump.

Please replace paragraph [0005] with the following amended paragraph:

[0005] A ~~The pump according to the present invention may include~~ has the distinguishing feature that, in the case of a 10-vane pump, the large circle region of the delivery contour is at least 10°-15°, preferably 13° larger than the angular pitch of the vane positions in the rotor (36°) of a 10-vane standard pump; and, in the case of a 12-vane pump, the large circle region of the delivery contour is at least 16°-25°, preferably 22° larger than the angular pitch of the vane positions in the rotor (30°) of a 12-vane standard pump. As a result, the compression region is shortened as compared to standard pumps, and the region that is available for the pressure equalization process (pressure equalization slots or intermediate capacities) is advantageously lengthened by the corresponding angle or angles.

Please replace paragraph [0006] with the following amended paragraph:

[0006] ~~Another~~ The pump also may include according to the present invention has the distinguishing feature that the length of the suction region remains substantially the same as that of a standard pump. By keeping a same-sized suction region, the advantage is derived that the maximum speed is still reached just as efficiently.

Please replace paragraph [0007] with the following amended paragraph:

[0007] ~~Also preferred is a~~ The present invention also may provide a pump, whereby, in the case of a 12-vane pump, the turning points of the displacement contour function in the direction from the suction region to the pressure region are spaced apart by $3.5 \times$ the vane pitch (vane pitch = 30°), and the turning points in the direction from the pressure region to the suction region are spaced apart by approximately $2.5 \times$ the vane pitch. This has the advantage that the turning points optimally reside more or less in the middle of the rise and fall zones of the delivery contour, thereby providing a transition function having radii of curvature that are not too small and are easily machined.

Please replace paragraph [0008] with the following amended paragraph:

[0008] ~~In addition, a~~ The present invention also may provide a pump is preferred, whereby, in the case of a 10-vane pump, the turning points of the displacement contour function are shifted by approximately 3° in the direction of rotation as compared to a 10-vane standard contour. Here, the advantage is derived that the superposed kinematic volume-flow pulsations of the upper-vane pump and the lower-vane pump optimally complement one another. Apart from that, the turning points are spaced apart by approximately $2.5 \times$ the vane pitch (the vane pitch of a 10-vane pump is 36°).

Please insert the following new heading before paragraph [0009]:

BRIEF DESCRIPTION OF THE DRAWINGS

Please replace paragraph [0009] with the following amended paragraph:

[0009] Preferred embodiments of ~~The~~ the present invention is described in the following with reference to the figures, in which:

Please insert the following new paragraph after paragraph [0015]:

[0015.1] Figure 7 shows the delivery contour of Fig. 3 with the rotor and vanes therein.

Please insert the following new heading before paragraph [0016]:

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Please amend paragraph [0018] as follows:

[0018] A delivery contour according to the present invention of a 12-vane pump is illustrated in Figure 3, with the pump with 12-vanes 70 in rotor slots 72 in a rotor 74 being shown in Fig. 7. The description of delivery contour 1 begins again at 0 degrees, at angular point 3. However, since the 12-vane pump has a vane pitch of 30° instead of 36°, the small circle region, which had amounted to 30° in the case of the 10-vane pump, may be reduced by these 6° to 24°, with the result that the rise zone of the delivery contour begins at 12°, at angular point 30, following half of a small circle region. The rise zone of the delivery contour, i.e., the suction region, still spans 54°, as in the case of the contours from Figures 1 and 2, and thus ends at 66°, at angular point 32, thus, in turn, 3° earlier than in the case of the 10-vane pumps. By retaining the same-sized suction region as in the delivery contours of Figures 1 and 2, the length of the suction region continues to be advantageously useful with respect to reaching the maximum speed. The turning point of the displacement contour function in the rise zone should advantageously lie in the middle of the rise zone and, therefore, resides at angular point 34, at approximately 37.5°. The large circle region of this delivery contour now extends from angular point 32, at 66°, to angular point 36, at 118°, and is thus once again lengthened by 3° as compared to the delivery contour from Figure 2, respectively by 10° as compared to the delivery contour of Figure 1, which, in turn, is beneficial with regard to improving pressure equalization processes using foamed transmission oil. The fall zone, thus the pressure region of this delivery contour, extends from angular point 36, at 118°, to angular point 38, at 168°, where the delivery contour then passes into the next small circle region again. The turning point of the displacement contour function in the fall zone resides at angular point 40, at 141.7°, and is thus spaced 104° from the turning point at angular point 34, which is roughly equivalent to 3.5 times the 30° vane pitch of the 12-vane pump. Turning point 40 in the fall

zone, thus in the pressure region, is spaced apart from the next turning point at angular point 42, by approximately 2.5 times the vane pitch of 30° .